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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/524,122
Filing Date: May 05, 2005
Appellant(s): SZENTISTVANY, ANDREAS CSABA

Ryan E. Anderson
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1 July 2008 appealing from the Office action mailed 26 June 2007.

In view of the Board remand of 9 February 2009, the Examiner's Answer mailed 4 August 2008 is herewith vacated and superseded by the following to correct for a typographical error in the heading of the rejection under the Grounds of Rejection.

(1) Real Party in interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

GB 2,339,419	Watson	1 - 2000
GB 2,322,450	Jones et al	8 - 1998
4,904,916	Gisske et al	2 - 1990
5,230,405	Bartlet	7 - 1993

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watson (GB 2,339,419 A) in view of Jones et al (GB 2,322,450 A).

Re: Claim 1, Watson discloses:

- a stair lift (not depicted) including a stair lift rail (2),
- a carriage (1) mounted on said rail for movement there along,
- an over-speed braking means (in part 8, 20) to brake said carriage along said rail when the speed of said carriage exceeds a pre-determined value (Page 7, Line 12);

however, Watson is silent regarding a chair, its mounting on said carriage and an angle determining means.

Attention is directed to Jones et al who teach a dynamic modeling of their stair lift chair (A, Fig. 7) pivotally mounted on said carriage, whereby the pivoting occurs about "the axis of rotation -P- ... the centre of the bearing about which the seat frame rotates" (Page 6, Line 11), and an angle determining means (C), whereby a "...control loop maintains the... assembly as near as possible to the vertical plane throughout the travel of the stair lift ... to ensure suitable safety..." (Page 4, Line 3). Jones et al teach further that deviation beyond a set range should therefore lead to engagement of a brake (Page 4, Line 12).

It would have been obvious to one having ordinary skill in the art to modify the invention of Watson with the teaching of Jones et al to provide a stair lift having suitable safety means to prevent the potential of discomfort to, or ejection of, the passenger.

Re: Claim 2, Watson discloses an over-speed braking means comprising a speed sensing means (5 – 7), to electronically sense the speed of said carriage.

Re: Claim 3, Watson discloses his speed sensing means comprising a roller (3) for engagement with said rail, and having means to determine the speed of rotation (5 – 7) of said roller.

Re: Claim 4, it would have been an obvious matter of design choice to provide an electromagnetic sensor of the instant invention in lieu of the optical sensor of Watson, since applicant has only stated a preference for an electromagnetic sensor (Page 5, Line 3), yet has not disclosed that such sensor solves any stated problem. It appears that the invention would perform equally well with an optical sensor.

Re: Claim 5, Watson discloses his speed output signal indicating a speed, said output signal compared to a pre-determined maximum carriage speed, and, in the event said output signal exceeds said pre-determined speed, said over-speed braking means (in part 8) triggers a command signal to a solenoid, thereby causing a brake member (20) to engage with said rail.

Re: Claim 6, Watson discloses his microprocessor (8) as a component of his over-speed braking means, said microprocessor being programmed (Pages 5 and 6, Lines 12 and 27, respectively) to receive an output signal regarding speed and, in response to said output signal indicate a speed for comparison to a pre-determined carriage speed, whereby a command signal to a solenoid (27) is generated if the speed is in excess of pre-determined carriage speed.

Re: Claim 7, Watson discloses his microprocessor (8) programmed for receiving and generating a speed output signal and a command signal to said solenoid, respectively, for the engagement of his braking member (20); however, he is silent regarding angle determining means.

As reviewed in Claim 1, Jones et al teach their angle determining means (C) and the engagement of their brake should their chair angle exceed a pre-determined angle (Page 4, Line 11), in keeping with their recommendation for "suitable safety circuits".

It would have been obvious to one having ordinary skill in the art to modify the reference of Watson with the teaching of Jones et al to provide a stair lift having a programmable logic controller to accommodate multiple sensors for the benefits of a more encompassing safety control scheme, greater applicability and a common interface.

Re: Claim 8, Watson discloses:

- a stair lift rail (2),
- a carriage (1) mounted on said rail for movement there along,
- a braking means (in part 8, 20) to brake said carriage along said rail,
- speed sensing means (5 – 7),
- and control means including a microprocessor (8) operable to receive signals from said speed sensing means, compare said signals to a pre-determined maximum, and generate a command signal to operate a braking means (in part 20, 27); however,

Watson is silent regarding a chair, an angle determining means and different angles of said rails.

Attention is directed to Jones et al who teach an angle determining means (C) for producing a signal of angular displacement of their stair lift chair (A, Fig. 7) and a control loop to compare such to a pre-determined range, whereupon said displacement is in excess of said range, "...some sort of brake is engaged" as a recommended means "... to ensure suitable safety..." (Page 4, Line 12). Furthermore, Jones et al teach the need for their angular determining means "when the carriage changes from one gradient to another..." (Page 1, Line 10).

It would have been obvious to one having ordinary skill in the art to modify the invention of Watson with the teachings of Jones et al to provide a stair lift having suitable safety means as afforded by conventional control systems, as well as the ability to accommodate change(s) in grade.

Regarding Claim 9, the components of Claim 9 would necessarily have to interact in order for the device to function. It would have been obvious to perform all the method steps of claim 9 when actuating the device of Watson as modified by Jones et al above, in a usual and expected fashion, in as much as the method claims recite no limiting steps beyond actuating each of the components.

Claims 10 through 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gisske et al (4,904,916) in view of Bartlet (5,230,405).

Re: Claim 11, Gisske et al disclose:

- a drive motor (25) to drive a carriage (22) along a rail (not depicted),
- an over-speed governor (112 in combination with 42) operable to brake said carriage with said rail (Col. 7, Line 61),
- limit engagement means (60, 58) operable independently of said over-speed governor and positioned to engage limit stops at each end of the rail (14, 16),
- and wherein said over-speed governor and said limit engagement means actuate a common isolation switch (not depicted, internal to controller) to disengage the drive motor; however,

Gisske et al disclose their limit stops (60) comprising infrared transmitters as a component of their inventive means to reduce wiring and afford greater flexibility to their installation.

Attention is directed to Bartlet who teaches their limit engagement means (107, 105) positioned to physically engage ultimate stops (103, 107) provided at each end of his rail (102), wherein said ultimate stops physically prevent displacement of said carriage from said rail and said limit engagement means cut power to his drive motor (170, Col. 5, Line 32).

It would have been obvious to one of ordinary skill in the art to modify the reference of Gisske et al with the teaching of Bartlet to utilize ultimate stops physically preventing further movement of a chair lift in combination with mechanical limit engagement means to actuate an isolation switch common to both the limit engagement

means and over-speed governor with which power to a drive motor is interrupted, for purpose of safety.

Re: Claim 12, Gisske et al disclose their carriage as powered by a battery (74), however they are silent as to their charging means.

Bartlet, however, teaches his limit engagement means (107, 105) conveying a charging current from his rail (102) to a battery (250) located within his carriage (104), for charging his battery when said carriage is at each end of said rail.

It would have been obvious to one having ordinary skill in the art to modify the invention of Gisske et al with the teaching of Bartlet to enable charging of the battery at the landings for points affording sufficient time for recharging.

Regarding Claim 10, the need to test primary components, control units and their interaction is well known to the art and critical in quality control, particularly prior to commissioning of equipment. It would have been obvious to perform all the method steps of claim 10 when producing the devices of Gisske et al as modified by Bartlet above, in a usual and expected fashion, in as much as the method claims recite no limiting steps beyond the cooperation by each of the components.

(10) Response to Argument

With respect to applicant's arguments to the prosecution of **Claims 1 - 9**, exclusively the prosecution of **Claim 1**, applicant principally argues that the rejection of said claim is improper due to:

- improper interpretation by the Examiner of the term "brake" in the disclosure of Jones et al and thereby improper teaching accordingly,
- convenient selection by the Examiner of a definition for the term "brake",
- failure by the Examiner to comment on the evidence filed 26 April 2007 under Rule 132, and thereby
- a lack of *prima facie* case of obviousness in making the combination of the references of Watson in view of Jones et al.

With respect to the interpretation of the term "brake" of Jones et al, as responded in the office action mailed 26 June 2007, the brake is to be engaged once an excessive angle of deviation of the chair has been reached; thereby stating an ultimate, corrective measure for purpose of safety. Jones et al, therefore, introduce the concept of braking should the chair, while following the changing gradient as designed for "normal stairlift operating speeds", be displaced beyond a set (maximum) angle of deviation. The action of braking as an additional safety means to the inadequate corrective action by a seat-leveling unit during excessive displacement is in keeping with overcoming undesirable speed or acceleration.

Examiner thereby acknowledged that the brake of Jones et al was associated with the chair; however, Examiner added that the brake of Jones et al, as understood from a definition of the term "brake", and therefore obvious to one having ordinary skill in the art, introduced "...the concept of braking should the chair ... be displaced beyond a set (maximum) angle of deviation" That the evidence filed under Rule 132 elaborated further with respect to the action/purpose of the brake of Jones et al did not overcome a very basic concept of braking a carriage of a stair lift, as disclosed by Watson, should a chair of said stair lift be angularly displaced beyond an allowable range.

Furthermore, as emphasized in the response of the aforementioned office action, "...the claim language cites an angle determining means being *capable of causing* actuation of said over-speed braking means, which is [well] within the disclosure of Jones et al in which the use of control algorithms, sensors and safety circuits are reviewed with the recommendation of engagement of a brake should the displacement angle of the seat exceed a specified range."

Consequently, in view of the devices of Watson and Jones et al, and the very basic concept of braking a stair lift, wherein said chairlift would be used to transport the elderly and physically impaired, braking a stair lift upon detection of an undesirable/excessive angle of displacement of a chair would have been obvious to one having ordinary skill in the art at the time the instant invention was made.

With respect to applicant's arguments to the prosecution of **Claims 10 - 12**, exclusively the prosecution of **Claims 10 and 11**, applicant argues that the rejections of said claims are improper because:

- with respect to **Claim 10**, Gisske et al are silent as to a form of their over-speed governor, i.e., one that is responsive to electronic speed sensing means, and Bartlet is silent with respect to an over-speed governor,
- with respect to **Claim 11**, Gisske et al disclose their "limit engagement means" and "limit stops", the latter found at landings, as comprising infrared transmitters which can not be interpreted as "ultimate" limit stops in keeping with the claim language, in that such limit stops must comprise physical (electromechanical) switches in accordance with regulations governing the design of chairlifts for safety, and, further to **Claim 11**,
- failure by the Examiner to comment on the evidence filed 26 April 2007 under Rule 132,
- Bartlet is silent with respect to an over-speed governor, and, finally,
- a lack of *prima facie* case of obviousness in making the combination of the references of Gisske et al in view of Bartlet.

With respect to **Claim 10**, contrary to applicant's assertion, Gisske et al disclose their over-speed governor as responsive to electronic speed sensing means (112, Col. 7, L. 60 – 64, Fig. 1) whereby their microcontroller receives an input from their speed sensor for which a serial (data) connection is disclosed.

As rejected above, though Gisske et al and Bartlet are silent with respect to testing, the need to test primary components, control units and their interaction is well known in the art and critical in quality control, particularly prior to commissioning of equipment. Furthermore, in that the prior art anticipates the flexibility of having programming features that can be optionally selected in the field, field- and factory testing are inherent to the art.

With respect to **Claim 11** and the limit stops, limit engagement means and Examiner's impermissible interpretation of "ultimate limit stops" as claimed, as reviewed in the rejection above, the limit stops (60, Col. 7, L. 51 - 55) of Gisske et al are infrared transmitters that are found at both the landings (14 and 16) to "...provide a fixed stop position... to ensure that the [stair] lift ...22 always stops at the same location at each landing".

Bartlet was cited for teaching limit engagement means positioned to physically engage ultimate stops provided at each end of his rail, wherein said ultimate stops physically prevent displacement of said carriage from said rail and said limit engagement means cut power to his drive motor.

Therefore, Bartlet was cited for the teachings of ultimate limit stops and the disengagement of a drive motor in combination with the actuation of a common isolation switch and over-speed governor, as disclosed by Gisske et al, for purpose of safety.

Consequently, Gisske et al in combination with Bartlet discloses "...the physical safety switches ...in addition to the motion control devices..." in contradiction to applicants arguments and evidence submitted under Rule 132.

With respect to **Claims 2 – 9 and 12,** applicant has not traversed the rejections.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Stefan Kruer/
Examiner, Art Unit 3654
9 February 2009
Conferees:

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TQAS TC 3600

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